ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Amateur Service	)	PR Docket No. 92-289
Rules Concerning the 222-225 MHz	)	
and 1240-1300 Mhz Frequency Bands	)	

To: The Commission

REPLY COMMENTS OF THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED

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March 23, 1993

SUMMARY

In its Reply Comments, the American Radio Relay League continues to support the creation of a small weak-signal subband at 222.000 - 222.150 MHz. Such will protect from harmful interference the numerous weak-signal, narrowband communications techniques practiced in the band now, and formerly occupying the 220.000 - 220.500 MHz segment.

The League further supports the expansion of Novice class frequency privileges to include the entire 222 - 225 MHz band, to permit a wider exposure to VHF operating techniques, and especially to the narrowband modes in that band. It is inadvisable, however, to permit Novice class licensees to be the control operators of repeaters. Such is inconsistent with the entry-level character of the license class, and with the elimination of the code requirement for the Technician class license, and the popularity of that license class, it is obvious that no one who wants to be a repeater control operator is precluded from doing so by virtue of the difficulty of obtaining the requisite license therefor.

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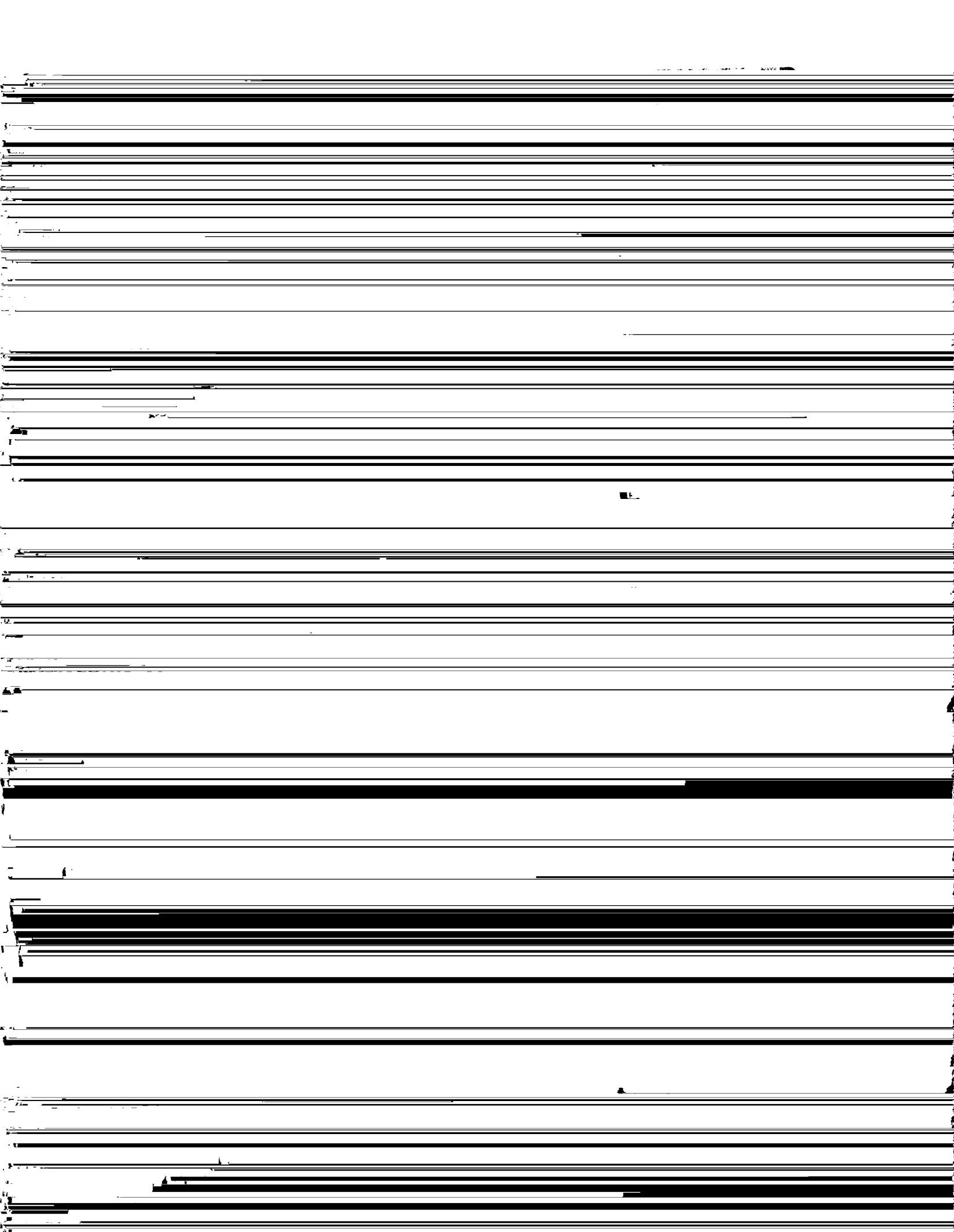

a subband by rule, at 222.000 - 222.150 or similar where repeaters and auxiliary stations would be prohibited;[2] B) Those which oppose the creation of any subband by rule, preferring to rely instead on volunteer frequency coordination and local option band planning; and C) Those who believe that a particular special-purpose fixed packet radio link, the operation of which, they assert, constitutes auxiliary operation, and which links amateur packet users in portions of Nevada and Northern California, and which operates on 222.140 MHz, should not by this proceeding be disrupted.

2. Within these three categories of comments, each targeted at one portion of the Notice proposals, a few commenters made reference to the proposal to permit Novice operators to use the entirety of the 222 - 225 MHz band, thus to permit a wider exposure to types of operation in that band. Those who said anything at all about this proposal in their comments supported it.

3. Similarly, there were relatively few comments concerning the proposal to permit Novice class licensees to be the control operators of repeaters. Those who commented on it almost

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[2] Some of the commenters who supported the creation of such a weak-signal subband either assumed, or specifically requested, that simplex FM emissions not be permitted in that subband either, citing instances of FM users occasionally transmitting in existing weak signal subbands in other bands, or in areas where SSB and CW users are principally found now in the lower segment of the 222 - 225 MHz band. Neither the League's petition for rule making, nor the Notice, propose to regulate the emission types which can be used in the 222.000 - 222.150 MHz subband. Rather, the only proposed change is that repeaters and auxiliary stations not be permitted in that segment. Such is consistent with existing rules establishing weak-signal segments in other amateur VHF and UHF bands.

universally opposed such authorization, on the basis that maintenance of repeaters is a specialized operating technique, properly reserved for licensees who have demonstrated a greater degree of technical ability than have Novice class licensees. The present examination for Novice class licensees contains nothing relative to the operation of repeaters, and as such, the commenters believed that such operation is best reserved for operators of other license classes.

II. A Weak-Signal Subband at 222.000 - 222.150 is Justified

4. The comments principally support the creation of a weak signal subband by rule at 222.000 - 222.150 MHz. These comments note that, until the reallocation of the 220 - 222 MHz segment, there was a 500 kHz subband, created by rule, similar to that in other amateur VHF and UHF bands, within which repeaters and auxiliary stations were not permitted. What is proposed in the Notice is the re-establishment of a segment thirty percent of the size of the former weak-signal subband established by rule. The reasonableness of this should be viewed in context: the entire band was reduced by forty percent. The suggestion that the remainder should be reserved exclusively for repeater and auxiliary operation, and that weak-signal operators should have to rely exclusively on local band planning and the goodwill of operators of uncoordinated repeaters who can operate with impunity in a voluntarily established weak-signal subband, is inequitable. The comments of William A. Tynan, W3XO, note that repeater users have

lost 1.5 MHz of spectrum, but retain 3 MHz at 222-225 MHz under current rules: 66 percent of the former bandwidth available for repeater and auxiliary operation. The re-establishment of the weak-signal subband as proposed would constitute a minimal protected area for numerous types of operations which are incompatible with repeater operation, and still provide repeater and auxiliary users with more than 60 percent of the bandwidth available before the reallocation of the 220 - 222 MHz segment. Indeed, numerous commenters claimed that a 300 kHz weak-signal segment would be more reasonable, and that 150 kHz represents the bare minimum for effective weak-signal operation on that band.

5. The types of operation facilitated by the proposed subband are important. The comments of Robert J. Carpenter, W3OTC, note as follows:

> Many VHF amateurs regularly use the 222 MHz band for long-distance terrestrial communication, only possible using the weak-signal, narrowband transmission modes such as CW and SSB. The use of this band for the ultimate in amateur communication, using reflection from the moon, has been severely impacted by the continuing threats of reallocation, and the recent reduction in the band's width. A station capable of communicating by the moon requires the investment of a year or more of spare time effort, and a very substantial sum of money, on the part of the amateur. Few people are willing to make this commitment unless the Commission can guarantee some sort of stability, as well as a portion of the band protected from repeater encroachment. The Commission's present proposal to reserve at least a small portion of the band goes a long way toward providing this encouragement.
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> (Comments of Robert Carpenter, at 1).

6. Other comments are similar. A good history of the benefits of experimental operation at 220 MHz is contained in the comments of Wayne Overbeck, N6NB, who notes that propagation experiments by

amateurs in the band, using narrowband modes, have produced remarkable findings concerning tropospheric ducting, meteor scatter communications, and the documentation in the 1980s of the possibility of both sporadic-E, and F-layer propagation communications at 220 MHz.

7. Opponents of creation of a weak-signal subband by rule suggest that local band planning efforts should be supported. As noted in the League's comments, nothing in its proposal for a weak-signal subband, however, detracts from the support of the League for voluntary band planning, including situations where local conditions may dictate variation from ARRL national band plans. An exception to the general reliance on local band-planning efforts, however, is where incompatible modes clash due to band crowding, and where there is a regulatory incentive not to comply with voluntarily established band plans. That circumstance exists here, where uncoordinated repeaters, to avoid interference to coordinated repeaters, especially in the Southern California area, have, and are likely to continue to locate in the area set forth in the ARRL

> will enhance the probability of a contact. It is equally important on the 222 MHz band as on any other band to designate appropriate DX windows and standard calling channels for Sporadic-E, tropo, EME, etc.
>
> (Comments of Eugene R. Poole, at 1).

The International Amateur Radio Union (IARU), the international association of national amateur radio societies, at its Region 2 General Assembly at Curacao in early September, 1992, accepted a report of its Committee C, which was tasked with review of certain matters involving VHF and UHF amateur radio allocations in Region 2. This Committee recommended, among other things, that an SSB calling frequency at 222.1 MHz be established within Region 2, and that such should be referred to affiliated societies for study by each. It would appear, therefore, that the proposed weak-signal subband is necessary to protect that segment, not only nationally, but also for international amateur communications, and the refusal to designate such a segment might prejudice the amateur band plans of other countries, to the extent that interference from repeaters and auxiliary stations would be occasioned thereby.

8. To the extent that certain commenters rely on the League's oft-stated support of local frequency coordination efforts as a basis for their opposition to the creation of a weak-signal subband by rule, that reliance is misplaced. That policy does not support the divergence from standard Commission practice - the preservation of non-repeater, non-auxiliary segments in VHF and UHF amateur bands; nor does it indicate in any respect the abandonment of local coordination efforts within established subbands. This is an instance in which changes in circumstances have necessitated the

re-establishment of a subband previously existing by rule, and which is necessary to permit nationwide, and international, use of the band by other than repeater users.

9. Several commenters participated in this proceeding solely for the purpose of stating their concern[3] about the possible need to relocate a fixed packet link between Northern California and Nevada, which apparently contains some auxiliary functions, and would thus be considered an auxiliary link.[4] The link, which operates at 222.140 MHz, would presumably be displaced and forced to relocate above 222.150 MHz under the proposed rule.

10. Leaving aside the parochial nature of such an objection, and without addressing whether or not the sponsor of the network can reaccommodate the displaced link in other portions of the 222.150 - 225.000 MHz residual subband[5] or elsewhere, the concerns

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[3] It is apparent that the sponsor of the packet network which would be affected, or an individual supporter, has urged the filing of a number of comments by users of the packet network, all of which are similar or identical in nature. Without technical justification, the apparent argument is that the link cannot be reestablished elsewhere in the 222.150 - 225.000 MHz band.

[4] This concern raises the unrelated issue of the breadth of the definition, at §97.3(a)(7) of "auxiliary station". Because that definition is extremely broad, and because the scheme of regulation of auxiliary facilities envisions principally analog, rather than digital, amateur communications, there is some justification for the review of that subject, perhaps as part of an overall review of the regulations applicable to digital amateur communications. It is not, in this context, necessary to address those issues.

[5] It is difficult to believe that, using directional antennas, changes in antenna polarization, and other technical means of accommodating auxiliary facilities in crowded bands known to frequency coordination persons, some reaccommodation of the displaced link is not reasonably possible at 222 - 225 MHz, or that

of users of the Northern California packet network are illustrative of the difficulty that all users have in reaccommodation after the reallocation of the 220 - 222 MHz segment. Fortunately, however, there is some relief in sight, with the release on March 22, 1993 of the Notice of Proposed Rule Making, FCC 93-119, proposing to allocate the 219-220 MHz band on a secondary basis to the Amateur Radio Service on a secondary, non-interference basis for amateur auxiliary (point-to-point) packet backbone networks and other amateur point-to-point fixed communications. This proceeding would, if implemented, precisely address the concerns of the Northern California and Nevada amateurs concerned about the displacement of the fixed auxiliary packet link referenced in their comments.

III. Novice Class Licensees Should Be Permitted To Operate Throughout the 222 - 225 MHz Band

11. The comments, without significant dissent, support the proposal contained in the Notice to expand the operating privileges available to Novice class licensees to permit operation throughout the 222 - 225 MHz band, rather than, as presently permitted, only on repeater input and FM simplex frequencies. Though this would be the only portion of the VHF spectrum where Novice class licensees would be allowed to operate using weak-signal and narrowband techniques, the comments, including those from weak-signal users,

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other bands cannot be substituted for the single 222.140 MHz link. If the thrust of the comments is that the sponsor of the link should not be inconvenienced in doing so, the argument is not well taken. Some accommodations must be made so that all have an opportunity to share the amateur bands.

were supportive. It is apparent that Novice licensees would be welcome in the additional segments, and that their operation there would be together with more experienced operators, thus to their benefit.

12. Commenters on this aspect of the Commission's proposal also note that expansion of the operating privileges at 222 - 225 MHz for Novices, to include CW and SSB narrowband operation, is consistent with the abilities they have demonstrated in their license examinations.

IV. Novice Class Licensees Should Not Be Permitted To Be Control Operators Of Repeaters

13. There was little or no support for the portion of the Notice which proposed to permit Novices to be the control operators of repeaters. The principal argument in opposition to this proposal, made by virtually every commenter who mentioned the issue, is that Novice class licensees have not learned, nor demonstrated, any proficiency in proper operation of, or technical regulatory limitations applicable to, repeaters. As stated by William A. Tynan:

> Since repeater operation is not my prime interest, I feel less strongly about allowing Novices to become repeater licensees and controllers. However, it is observed that operating a repeater generally requires greater, and different, knowledge than is currently tested in the Novice examination. I believe that it would be inappropriate to burden all applicants for the Novice license, by including repeater related questions on that exam. Thus, it would appear better to continue to require a Technician Class, or higher, license to engage in repeater operation.
>
> (Comments of William Tynan, at 2).

Other comments were similar, regardless of their position on the establishment of a weak-signal subband. John C. Thomas of Parma, Ohio stated as follows:

> Novices are beginners with very limited technical skills and experience having proved themselves (capable) of only the basics in (their) license examination(s). If a Novice wishes to construct and operate a repeater station, upgrading his or her license to at least Technician class does not present a significant barrier. I encourage Novice participation in repeater stations as users to gain experience to upgrade, not to remain as Novices that would buy repeaters in turnkey form then to get into trouble when they malfunction hurting the amateur and other services with spurious signals.

(Copy of John C. Thomas letter)

privileges to include the entire 222 - 225 MHz band, to permit a wider exposure to VHF operating techniques, and especially to the narrowband modes in that band. It is inadvisable, however, to permit Novice class licensees to be the control operators of repeaters. Such is inconsistent with the entry-level character of the license class, and with the elimination of the code requirement for the Technician class license, and the popularity of that license class, it is obvious that no one who wants to be a repeater control operator is precluded from doing so by virtue of the difficulty of obtaining the requisite license therefor.

Accordingly, the foregoing considered, the American Radio Relay League, Incorporated respectfully requests that the Commission modify the Amateur Radio Service rules in accordance with the Notice proposal, save for the proposal contained in RM-7888, which should be dismissed.

Respectfully submitted,

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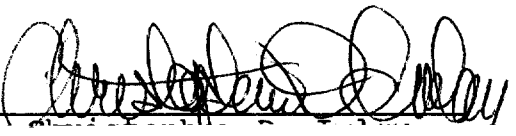
By 

CERTIFICATE OF SERVICE

I, Margaret A. Ford, Office Manager of the law firm of Booth, Freret & Imlay, do certify that copies of the foregoing REPLY COMMENTS OF THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED were mailed this 23rd day of March, 1993 via U. S. Mail, first class, postage prepaid, to the offices of the following:

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